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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/505,775	02/17/2000	Kenji Oi	1076.1053/JDH	6984

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EXAMINER	
SEFCHECK, GREGORY B	
ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/505,775	OI ET AL.	
	Examiner	Art Unit	
	Gregory B. Sefcheck	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 November 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *5,9,15 and 18-22* is/are allowed.

6)☒ Claim(s) *1-4, 6-8, 10-14, 16, 17, and 23-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

- Applicant's Amendment filed 11/17/2004 is acknowledged.
- Claims 1, 10, 12, 13, 16, 23, and 24 have been amended.
- Claims 1-26 remain pending.

Claim Objections

1. Claim 4 is objected to because of the following informalities:

Claim 4 recites "the data portion stores identification information indicating whether the data portion is blank." It appears that the header portion would store identification information indicating whether the data portion is blank. If the data portion stored the identification information, it would not be possible for the data portion to be blank. For examination purposes, the Examiner has interpreted claim 4 as the header portion storing the identification information.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 2, 4, 6, 7, 10, 12, 16, 17, and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Limb in view of Tateyama (US006018816A).

- Regarding claims 1, 6, 10, 16, and 23,

Limb discloses a method in a communications system that has stations that are connected by lines. Referring to Fig. 1, the stations are connected by two lines 10,11 (col. 5, lines 50-52; claim 1,23 - first node, second node, and a third node connected by a bus).

Frames are passed down the lines (col. 6, lines 19-21; claim 1,6,10,16,23 - transferring a write packet from the first node to the second node). Fig. 6 shows an example of a frame that is used in the system. The frame comprises two parts: a control field 20 and a data field 21. The data field receives data packets from the stations (col. 6, lines 45-48).

When a station receives a frame in which the data field is empty, it transmits a packet to that frame (col. 6, lines 26-28; claim 1,10,23 - storing data to be written in a data portion of a packet addressed to the third node in the data portion of the write packet at the second node).

The frame is then passed along the line with its busy bit set to indicate that its data field now contains data (claim 1,10,23 - transferring the write packet from the second node to the third node; claim 6,16 – data portion of packet may store data or be blank). Also, the present invention may be used in an arrangement in which data packets are passed only in one direction (col. 5, lines 12-14; claim 1,10,16,23 - bus but not connected in a ring form). It is inherent in Limb that there is an identifying circuit to recognize the busy bit indicating whether the data field is empty or not.

Limb does not explicitly disclose the nodes within an IEEE 1394 topology.

Tateyama discloses a processing system and method involving devices connected via a 1394 serial bus for processing received data packets with blank data portions (Abstract; claim 1,10,16,23 – nodes constitute an IEEE 1394 topology).

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the method and system of Limb using nodes constituting an IEEE 1394 topology, as shown by Tateyama, as the IEEE 1394 is a standard bus topology/type widely used in the art, enabling standardized communication and performance between the nodes of Limb.

- Regarding claims 2 and 24,

Limb discloses a method in a communications system as shown above. As shown above, Limb discloses that the station loads a data into the frame when the data field of the frame is empty (col. 6, lines 26-28; claim 2,24 - wherein the write packet comprises a blank data portion for storing the data).

- Regarding claim 4,

Limb discloses a method in a communications system that covers all limitations of the parent claims. As shown above, the frame contains a control field and a data field. If the busy bit in the control field is set, then this indicates whether or not the data

field is empty (col. 6, lines 21-24; claim 4 – header portion stores identification information indicating whether the data portion is blank).

- Regarding claim 7,

Limb discloses a method in a communications system that covers all limitations of the parent claims. Limb discloses where the frames are sent with each writing cycle (col. 6, lines 60-63; claim 7 - predetermined time periods).

- Regarding claim 12,

Limb discloses a method in a communications system that covers the similar limitations shown above in regards to claim 1. Limb shows that the data portion may be filled or empty based on the setting of the busy bit in the control portion of the packet (col. 6, lines 45-53).

Therefore, a packet received at a second node from a first node that is destined for a third node would be retained and rewritten in a packet transmitted to the third node from the second node, as shown in Fig. 1 (claim 12 – retaining and rewriting data received from the first node and addressed to the third node).

- Regarding claim 17,

Limb discloses a method in a communications system that covers all limitations of the parent claims. As shown above, the frame contains a control field and a data field. If the busy bit in the control field is set, then this indicates whether or not the data

field is empty or not (col. 6, lines 21-24; claim 17 – identification information indicating whether the data portion is blank).

- Regarding claims 25 and 26,

Limb discloses a method in a communications system that covers all limitations of the parent claims.

Limb does not expressly disclose where the data is image data.

Tateyama discloses a processing system and method involving devices connected via a 1394 serial bus for processing data including image data.

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the method and system of Limb for processing image data, or any other common type of data that is communicated between devices. One would have been motivated to send image data because if that was the type of data that needed to be transferred, then it would be efficient to transfer it using the method taught in Limb.

4. Claims 3, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Limb in view of Tateyama further in view of Perlman (US 5,398,242).

- Regarding claim 3 and 13,

Limb discloses a method in a communications system that covers all limitations of the parent claims.

Limb does not expressly disclose where the first node has information indicating a plurality of second nodes substantially simultaneously send packets to a plurality of third nodes.

Perlman discloses broadcasting an explorer packet, which transmit simultaneously from a plurality of second stations to a plurality of third stations. (col. 6, lines 24-62 and Fig. 10C; col. 22, lines 11-61; claim 3,13 – information indicating a plurality of second nodes substantially simultaneously send packets to a plurality of third nodes).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Limb in order to send many write packets simultaneously like the broadcast packets in Perlman. One would have been motivated to do this because it would have been more efficient to transfer write packets simultaneously if all of the write packets were to carry similar information as similar speeds.

- Regarding claim 14,

Limb discloses a method in a communications system that covers all limitations of the parent claims.

As shown above, the frame contains a control field and a data field. If the busy bit in the control field is set, then this indicates whether or not the data field is empty or not (col. 6, lines 21-24; claim 14 – identification information indicating whether the data portion is blank).

5. Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Limb in view Tateyama further in view of Ching et al. (US 4,665,514), hereafter Ching.

- Regarding claims 8 and 11,

Limb discloses a method in a communications system that covers all limitations of the parent claims.

Limb does not expressly disclose padding the packets until they are to a fixed size.

Ching discloses padding to build a packet to 64 bits of data to make the data packet fixed size.

It would have been to one of ordinary skill in the art at the time of the invention to pad the packets until they were filled to capacity in Limb, as shown by Ching. One would have been motivated to do this because sending packets of a fixed length reduces the complexity of having to determine when a variable length packet ends.

Allowable Subject Matter

6. Claims 5, 9, 15, and 18-22 allowed.

- Regarding claims 5, 15, and 18,

The prior art of record does not teach or fairly suggest a method of transferring packets between a first, second and third node, wherein a write packet is transferred from a first node to a second node by first transferring a guide packet that stores guide

information indicating a state of the write packet before the first node transfer the write packet to the second node and storing data by the second node comprises writing information indicating that the data has been written to the write packet as the guide information of the guide packet addressed to the third node.

- Regarding claim 9,

The prior art of record does not teach or fairly suggest a method of transferring packets between a first, second, and third node in which a second packet storing second data is transferred from a first node to a second node and the second data is rewritten, prior to being transferred to the third node, with data from a previous transfer from the first node to the second node that has been processed and stored at the second node.

- Regarding Claim 19,

The prior art of record does not teach or fairly suggest a packet transfer control circuit configured as described in claim 19 which contains a processor that receives packet data from an input link layer processing circuit if the packet is a normal, non-write packet and receives packet data from an identification circuit if the packet is a write packet, in which the processor pads the data portion if a control signal from the identification circuit indicates the data portion is blank.

Response to Arguments

7. Applicant's arguments with respect to claims 1, 10, 12, and 23 have been considered but are moot in view of the new ground(s) of rejection.

8. Applicant's arguments filed 11/17/2004 regarding claims 13 and 16 have been fully considered but they are not persuasive.

- In the Remarks on pg. 12 of the Amendment regarding claim 13, the Applicant contends that Limb does not disclose a first node having "information indicating a plurality of second nodes substantially simultaneously send packets to a plurality of third nodes."
- Claims 3 and 13 both recite the limitation of a first node having "information indicating a plurality of second nodes substantially simultaneously send packets to a plurality of third nodes." Claim 13 was inadvertently excluded from the 103 rejection of claim 3 over Limb in view of Perlman in the previous Office Action filed 6/18/2004. However, the common limitation was explicitly addressed in the rejection of claim 3. Claim 13 is now properly included in the rejection as shown above.

- In the Remarks on pg. 13 of the Amendment regarding claims 13 and 16, the Applicant contends that Limb does not disclose "transferring a plurality of write packets to each second node".

- The Examiner respectfully disagrees. Limb discloses a method and system for communicating a plurality of frames between a plurality of stations. The passages of Limb used in the rejections above may only explicitly describe the steps of transferring one packet for illustrative purposes, but it is clear that these steps can be used for the transfer of each of a plurality of packets to each of the plurality of stations shown in Fig. 1.

9. In response to applicant's arguments regarding claims 23 and 24 on pg. 14 of the Amendment, the recitation "connected in star form" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Lym et al. (US 20040125825A1) discloses a predictive time stamping of transmitted data
- Ando et al. (US 20010044878A1) discloses an information recording method, device and storage medium
- Kerr et al. (US006105119A) discloses a data transfer circuitry, DSP wrapper circuitry and improved processor device, methods and systems
- Fang et al. (US005946708A) discloses an automated cache manager for storage devices

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory B. Sefcheck whose telephone number is 571-272-3098. The examiner can normally be reached on Monday-Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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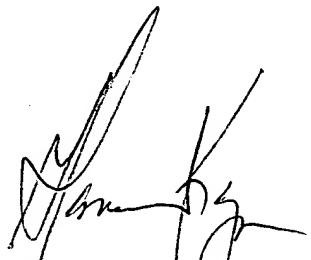

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